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| 10/579,497 | 05/16/2006 | Hiroyuki Inokawa | 286597US6PCT | 1615 |
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| OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | | |
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| KETEMA, BENYAM | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/579,497

Applicant(s)

INOKAWA, HIROYUKI

Examiner

BENYAM KETEMA

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-15 is/are rejected.
7) ☒ Claim(s) 9, 10 and 13-15 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 16 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-85/06)
Paper No(s)/Mail Date 05/16/2006, 12/11/2006, 05/07/2007
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-15 are presented for examination.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. JP 2003-386743 filed 11/17/2003 and JP 2003-389643 filed 11/19/2003.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on 05/16/2006, 12/11/2006 and 05/07/2007 has been considered by the examiner.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the feature comprising **"time period measurement means"** as in claims 9,10 and 13-15 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure

number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-9 and 11-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Fukumoto et al. (US PG Pub No 2002/0149561).

As in Claim 1, 6, 7 and 8, Fukumoto et al. discloses *an input apparatus* (Paragraph 2), *information process apparatus* (Paragraph 330), *a remote control apparatus* (Paragraph 204 line 4 wireless communication unit) *and a control method for performing an input operation as a pressing operation or a touching operation on a front surface of a panel* (Paragraph 7), *comprising:*

- *input detection means for detecting whether the pressing operation or the touching operation is being performed on the front surface of the panel;* (Paragraph 7 line 1- 8) discloses an operation unit (input detection means) receives an operation input from hand-touched portion of the electronic device.
- *waveform generation means for generating a signal waveform after the pressing operation or the touching operation is performed* (Paragraph 13 line 1- 6 and Paragraph 168 line 7-11) discloses first vibration generator (*waveform generation means*) generates a vibration to be received by operation unit (receiver) when the device is pressed or touched. Wherein the vibration generator and waveform data of Fukumoto et al. performs same as waveform generator and signal waveform of Inokawa respectively.
- *when the input detection means detects that the pressing operation or the touching operation is being performed and* (Paragraph 7 line 1- 8) discloses an operation unit (input detection means) receives an operation input from hand-touched portion of the electronic device.

- *generating a signal waveform having a larger amplitude after the pressing operation or the touching operation is confirmed than* (Paragraph 355 line 6-10 and Fig 59 & 60 item 550)
- *the signal waveform generated after the pressing operation or the touching operation is performed; and* (Paragraph 170 line 1-7) *discloses waveform data is read from memory that correlate to touch signal that has been inputted by the user when the touching or pressing operation was performed.*
- *panel deforming means for deforming the panel corresponding to the signal waveform generated by the waveform generation means.* (Paragraph 52 line 1-16)

As in Claim 2, Fukumoto et al. discloses *the input apparatus* (Paragraph 2) *as set forth in claim 1, wherein the signal waveform generated by the waveform generation means after the pressing operation or the touching operation is performed has a smaller amplitude and a higher frequency than the signal waveform generated by the waveform generation means after the pressing operation or the touching operation is confirmed.* (Paragraph 351 line 4-8)

As in Claim 3, Fukumoto et al. discloses *the input apparatus* (Paragraph 2) *as set forth in claim 1, wherein the input detection means detects a signal that varies when the pressing operation or the touching operation is being performed on the front surface of the panel to determine whether the pressing operation or the touching*

operation is being preformed on the front surface of the panel, and wherein (Paragraph 7 line 1- 8) discloses an operation unit (input detection means) receives an operation input from hand-touched portion of the electronic device. the waveform generation means generates a signal waveform after the pressing operation or the touching operation is performed [(Paragraph 13 line 1- 6 and Paragraph 168 line 7-11) discloses first vibration generator (waveform generation means) generates a vibration to be received by operation unit (receiver) when the device is pressed or touched. Wherein the vibration generator and waveform data of Fukumoto et al. performs same as waveform generator and signal waveform of Inokawa respectively.] the signal starts changing and generates a signal waveform having a larger amplitude after the signal becomes stable and the pressing operation or the touching operation is confirmed (Paragraph 355 line 6-10 and Fig 59 & 60 item 550) than the signal waveform generated after the pressing operation or the touching operation is performed. (Paragraph 170 line 1-7) discloses waveform data is read from memory that correlates to touch signal that has been inputted by the user when the touching or pressing operation was performed.

As in Claim 4, Fukumoto et al. discloses *the input apparatus (Paragraph 2) as set forth in claim 1, wherein the waveform generation means varies a signal waveform after the pressing operation or the touching operation is performed until the pressing operation or the touching operation is confirmed. (Paragraph 405 line 1- 10)*

As in Claim 5, Fukumoto et al. discloses *the input apparatus* (Paragraph 2) *as set forth in claim 1, wherein when the input detection means detects that the pressing operation or the touching operation is being preformed and the pressing operation or the touching operation is not accepted as the input operation, the waveform generation means generates a signal waveform only after the pressing operation or the touching operation is performed until the pressing operation or the touching operation is confirmed.* (Paragraph 348 line 1-13)

As in Claim 9, 13, 14 and 15, Fukumoto et al. discloses *an input apparatus* (Paragraph 2), *information process apparatus* (Paragraph 330), *a remote control apparatus* (Paragraph 204 line 4 wireless communication unit and Paragraph 430 line 6) and *a control method for performing an input operation as a pressing operation or a touching operation on a front surface of a panel* (Paragraph 7), comprising:

- *input detection means for detecting whether the pressing operation or the touching operation is being performed on the front surface of the panel;* (Paragraph 7 line 1- 8) discloses an operation unit (input detection means) receives an operation input from hand-touched portion of the electronic device.
- *time period measurement means* (Fig 2 item 113) *for measuring a time period after the pressing operation or the touching operation is performed until the pressing operation or the touching operation is confirmed* (Paragraph 168-173 and fig 5) discloses that CPU of the device determines the touch signal and

count the time for the drive signal to be applied, and also (Paragraph 208-209) discloses a waiting time period between touch period and reporting period.

- *panel deforming means for deforming the panel corresponding to the signal waveform generated by the waveform generation means.* (Paragraph 52 line 1-16 and Paragraph 354 line 3-7)
- *waveform generation means* (Fig 2 item 113) *for generating a signal waveform corresponding to the time period measured by the time period measurement* (Fig 2 item 113) *means*; (Paragraph 208-209) discloses a waiting time period between touch period and reporting period, therefore the output of vibration (*signal waveform*) that is generated when the user touch input device would corresponds to time period (reporting period) measured by CPU.
- *when the input detection means detects that the pressing operation or the touching operation is being performed on the front surface of the panel;* (Paragraph 7 line 1- 8) discloses an operation unit (input detection means) receives an operation input from hand-touched portion of the electronic device.

As in Claim 11, Fukumoto et al. discloses *the input apparatus* (Paragraph 2) *as set forth in claim 9, wherein the waveform generation means generates a signal waveform having a larger amplitude* (Paragraph 355 line 6-10 and Fig 59 & 60 item 550) *when the time period measured by the time period measurement means is shorter than a predetermined time period than a signal waveform generated when the time period measured by the time period measurement means is longer than the*

predetermined time period. (Paragraph 405 line 1- 10) discloses waveform data that is stored in the memory and accessed by the CPU can be varied.

As in Claim 12, Fukumoto et al. discloses *the input apparatus* (Paragraph 2) *as set forth in claim 9, wherein the input detection means detects a signal that varies when the pressing operation or the touching operation is being performed on the front surface of the panel to determine whether the pressing operation or the touching operation is being preformed on the front surface of the panel, and wherein* [(Paragraph 7 line 1- 8) discloses an operation unit (input detection means) receives an operation input from hand-touched portion of the electronic device.] *the time period measurement means confirms the pressing operation or the touching operation* [(Paragraph 208-209) discloses a waiting time period between touch period and reporting period.] *when the signal that varies after the pressing operation or the touching operation is performed becomes stable and measures a time period after the pressing operation or the touching operation is performed until the pressing operation or the touching operation is confirmed.* (Paragraph 405 line 1- 10)

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fukumoto et al. (US PG Pub No 2002/0149561) in view of Kobayashi et al. (US PG Pub No 2004/0021645).

As in Claim 10, Fukumoto et al. discloses *the input apparatus* (Paragraph 2) as discussed above, but fails to disclose *the waveform generation means generates a signal waveform having amplitude reversely proportional to the time period measured by the time period measurement means*. However, Kobayashi et al. (Fig 3 item 106,108 and Paragraph 72-77) discloses the relation between amplitude and time, where the waveform attenuate as time gets longer. Fukumoto et al. and Kobayashi et al. are analogous art because they are from the common area of user interface device that has input detection system. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the references (Fukumoto et al. and Kobayashi et al.), because Kobayashi et al. discloses the time required for the sonic wave generated by the sonic wave generation source to arrive at each of the detection

sensors 3_Sa to 3_Sd can be measured. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the input device of Fukumoto et al. so that the amplitude of the waveform is inversely proportional to time period because Fukumoto et al. discloses an input device that shows a relation between amplitude and time as found in claim 6.

Prior Art

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent No 5,666,113 discloses A system for using a touch-sensitive computer input touchpad for computer cursor control and keypad emulation in which the system senses a touch on the touchpad surface, resolves lateral touch movement after the touch. Kitada et al. (US PG Pub No. 2002/0047833) discloses a system for detecting a position of a stylus movable on an interactive board includes a position information transmitter and information detection sections.
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BENYAM KETEMA whose telephone number is (571)270-7224. The examiner can normally be reached on Monday- Friday 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shalwala Bipin H can be reached on 571-272-7681. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Benyam Ketema /

Examiner, Art Unit 2629

/Bipin Shalwala/

Supervisory Patent Examiner, Art Unit 2629